

Abstract**A MODELING METHOD FOR TAKING INTO ACCOUNT THERMAL HEAD AND AMBIENT TEMPERATURE.**

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The present invention relates to thermal printing or thermography, more specifically to the generation of a mathematical model of the thermal steady state printing characteristics of a thermal printing system, and the use of such model for the driving of a thermal print head.

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A method is described for building a steady state thermal model for a thermal print head when printing an image on a graphical medium. It is based on a calibration printout on the graphical medium under consideration. The constraints for this calibration printout are translated in instructions on the pattern being printed and the line time used during the printing process. The graphical

15 output of the calibration printout can be linked with the excitation used on the heater element and the heat sink temperature, if necessary supplemented with additional parameters. Using curve-fitting techniques, an analytical expression is fitted through the set of data obtained by printing the calibration printout. Once this analytical relationship is known, for a given requested graphical output, the

20 excitation time can be solved for.

+ Fig. 3